

Virtual Desktop Pilot Implementation Project

A Collaborative IT Project

Project Steering Chair: Claudio Pini

PM: John Mah Co-architect : Brent Dunington

IT Managers Meeting: April 19, 2010



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Virtual Desktop Pilot Implementation Project

- **Who: The Pilot Project** (8 months: Oct/09 – May/10):

Collaborative Project Teams:

- **Steering:**

- UBC IT (incl SIS, FRO, HR), Medicine, Science, Dept Comp Sci, Sauder, President's Office

- **Project Team:**

- **Architecture**

- UBC IT

Jason Fiset, Brent Dunnington, Duncan Gourlie

- Medicine IT

Dennis Chow

- Computer Science

Sean Godel

- **Desktop Support**

- OAB

Eric Lai, Alvin Poon

- UBC IT

Robert Padwick, Irina Zilbershtein

- Deployment

Ryan O'Grady (Med), Tom Yerex (Sci), Patrick Ho (Sci), Sean Shang (Sci)

- **Project Management**

- UBC IT

John Mah, David Murray, John Cruz

- **Pilot Users:**

- Approx 40 in the Old Administration Building

- Approx 40 in UBC IT LS Klinck building



Virtual Desktop Pilot Implementation Project

- Why: The Pilot Project

- Green: thin-client + servers + SAN + HVAC < Desktop / Laptop energy consumption
 - $10w + 5w + 5w < 100 / 40w$
 - = less CO² and < \$\$ kwh
- Support effort & Standardization:
 - Reduction in number of images << current state of image variations
 - Reduction in proliferation of hardware models
 - Reduction in desk-side support effort for thin-clients or soft VDI clients
 - Reuse central library for images & virtualized UBC applications
 - Standard GPO's for View clients + localized GPO's
- Leverage common infrastructures/processes:
 - VMWare server farm
 - NetApp appliances
 - Standard support / deployment / image management processes

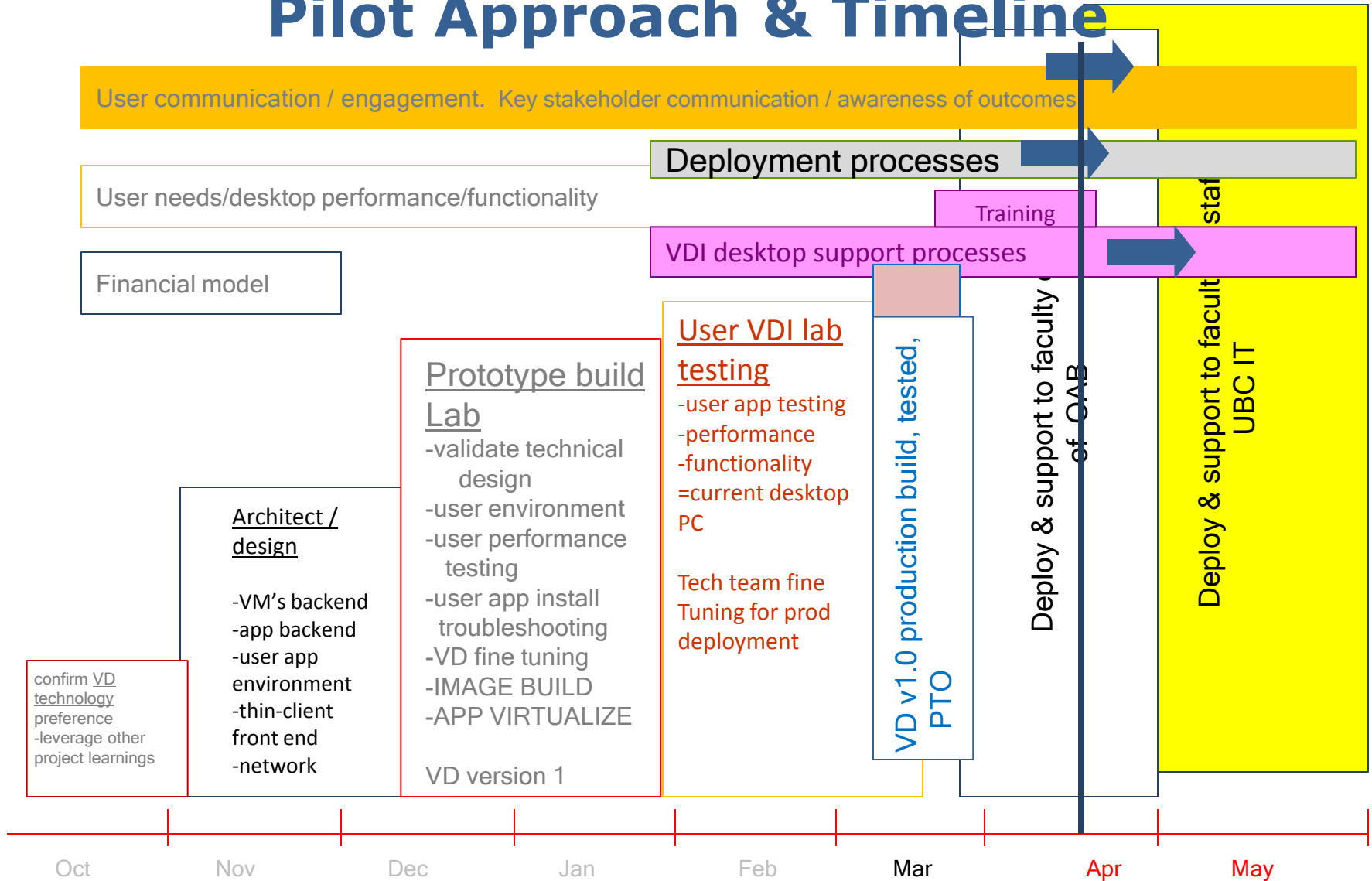


Virtual Desktop Pilot Implementation Project

- What/When: The Pilot Project
 - Back-End: Architect, build, test, deploy a scalable Virtual Desktop Infrastructure environment for UBC
 - Based on **VMWare View 4 (windows-based)**, NetApp, Virtual Grid, Enterprise AD
 - Front-end: Capture user desktop requirements in OAB, UBC IT
 - Select, test, install **thin-client** devices on a subset of pilot users
 - Install **soft View client** on remaining users/home access PC's
 - Support Process: develop a working model for VDI Desktop deployment/support/image management
 - Pilot admin user groups: 80 users in UBC IT and OAB
 - Financial: Develop a TCO model, energy saving model
 - Communication: to UBC as a whole via IT.UBC website and forums



Pilot Approach & Timeline



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Systems & Technology

- Vmware HA,DRS,vCenter
 - VMWare User Data Disk
 - Folder Redirection
 - Logon Scripts
 - VMware Thin Apps
 - User Home Directories
 - Net App Storage
-
- HP Blade Servers



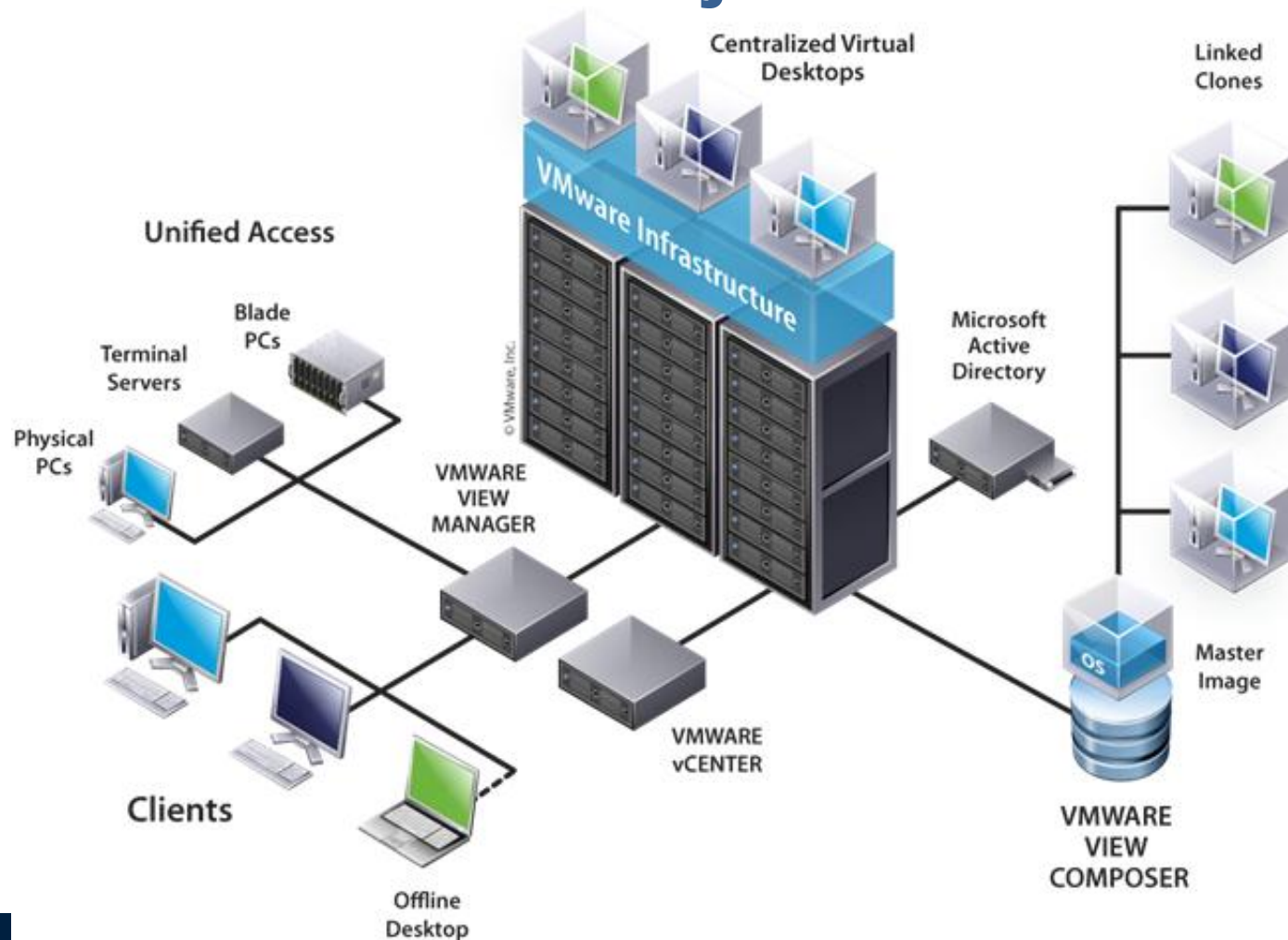
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Administration

- Delegated administration given to each Department Administrator.
- Separation of each Department using VMware resource pools.
- vCenter for central administration, performance trending, and alerting.



Virtual Desktop Pilot Implementation Project



Virtual Desktop Pilot Implementation Project

How is it the same?

1. Windows XP or Vista experience
2. Fast login, access to all the applications needed to do your daily work
3. Same application performance as you currently experience
4. All your IE favorites, personal settings
5. Can network print as you normally do today



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How is it different?

1. Low power consumption
2. All work files stored on a **network H:\drive**, not local C:\
3. No wallpapers
4. No screensavers
5. New required software must be installed by IT desktop support
6. Laptop users cannot use the 'virtual desktop' on a bus, car or airplane (offline from the internet)
7. No Macintosh version yet
8. USB peripherals are not yet fully support until Sept/2010 eg. Local printers, CD/DVD burning, web-cams.
9. Must use USB keyboards/mice



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How is it better?

1. Able to connect to the same 'virtual desktop' from home or (any other UBC workstation – future)
2. Your personal favorites & settings stay with your 'virtual desktop' no matter where you access it from
3. Laptop users can chose to keep it at work, and use their personal computer at home to access the same work 'virtual desktop'
4. For IT, simplified support – now using a common 'virtual desktop'
 1. Longer lifespan for the thin-client device (>5 yrs)
 2. Upgrades to windows & applications will be automatically delivered to all users, without desk-side visits



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VDI video demo



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Virtual Applications Created

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Virtualized = Globally avail.

1. Office suite 2007
2. Adobe reader 9.31
3. Adobe Acrobat 9 pro
4. Adobe Creative Suite
5. Crystal Reports Std 10
6. Crystal Reports Pro 10
7. Visio Std 2007
8. Visio Pro 2007
9. Project Pro 2007
10. Firefox
11. Skype 4.1.x
12. Snagit 7
13. 7-zip
14. Various media protocols
15. Flash
16. Nero Express & 7 (CD burning)

Tested Webapps

1. Peoplesoft
2. Sharepoint
3. SISC
4. UBC Webmail

Not Virtualizing

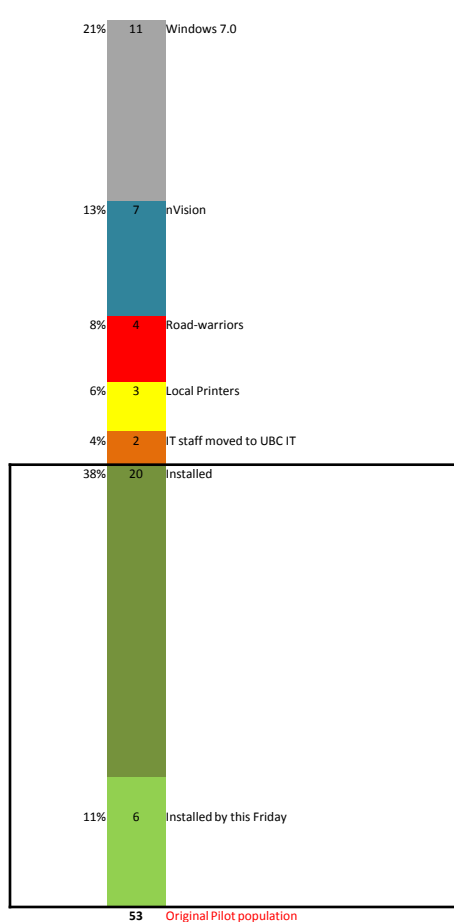
1. Viking
2. Peoplesoft legacy app
3. Google Chrome
4. Various photo capture utilities (Sony, Canon)
5. Infuser
6. iTunes

VMWare roadmap

1. July: Thin Win7 OS
2. July: Partial USB support on zero clients
3. Sept Full USB support on zero clients



OAB Deployment Progress as of 4/16/2010



21% = 11 = Windows 7.0

13% = 7 = nVision

8% = 4 = Road warriors

6% = 3 = Local printers

4% = 2 = IT staff reorg

Excluded
From the
Pilot

38% = 20 = installed for 2d - 2w

Remain in
the Pilot

11% = 6 = installed on 4/15

53 = Original Pilot user population



OAB Pilot Users: Overall Impressions (informal discussions)

- ✓ Seems the same [performance] as before
- ✓ Connecting from home is better
- ✓ Like not having to deal with 'auto-updates' from microsoft, adobe, etc
- ✓ Like the idea of fixes being pushed from central support
 - we've had several weekly OS updates already without the users knowing it.
- ✓ Appreciate the reduction in environmental waste
- ✓ Seem to appreciate access to more UBC IT support resources



OAB Pilot Users: Overall Major Challenges

(informal discussions)

- ❑ Occasional incidents of "network connection lost"
- ❑ Outlook running in non-cached mode: users notice server lag
"Outlook is trying to retrieve data from the Microsoft Exchange Server
ADMINMAIL.admin.ad.ubc.ca"
- ❑ Some people noticed lag in the interface (click-and-drag a window). generally addressed by turning off windows 'effects'
- ❑ Sad to give up the convenience of local printers
 - ✓ Move some to network printers with 'secure' print codes
 - ✓ Left critical needs users out of the VDI pilot
 - ✓ Reviewing desktop network printers, plug n' play workarounds
- ❑ Outlook search can take longer (unique to those with multi-gigabyte mail files)
 - ✓ Organize into folders < 5,000 items
 - ✓ Use Advanced Search
 - ✓ Clean up mailbox emails



OAB Pilot Users: Overall Minor Challenges

(informal discussions)

- ❑ Many users **do not like the hi-res (1280 x) displays** (small font) and would like a way to 'downgrade'. VMWare has plans to address this in a future release (timing TBD)
- ❑ Replacement keyboards were not ideal (tired or cheap)
- ❑ Two firewall issues (access to ISIS and OAB-BES share)
- ❑ Canon "Hole Punch" not user selectable in a shared environment (one user noticed this)
- ❑ Miss having an IT resource on-site, particularly in the mornings.



Virtual Desktop Pilot Implementation Project

- What's Next: *Beyond* The Pilot Project
 - Assess the Pilot: 1-month sustainment/support
 - Monitor, metrics, support issues
 - Feedback into design -> larger scale deployment to UBC
 - Feedback in support processes -> scalable to local / global UBC levels
 - Deployment Roadmap: Captured user desktop req'ts for:
 - Sauder / Science / Dept. of Comp Science / Medicine / UBC Library / FRO and HR / SIS
 - Decision on next user groups within these faculties
 - Dependencies:
 - Enterprise AD status
 - Network end-to-end infrastructure status
 - Readiness of local support groups to manage
 - Funding

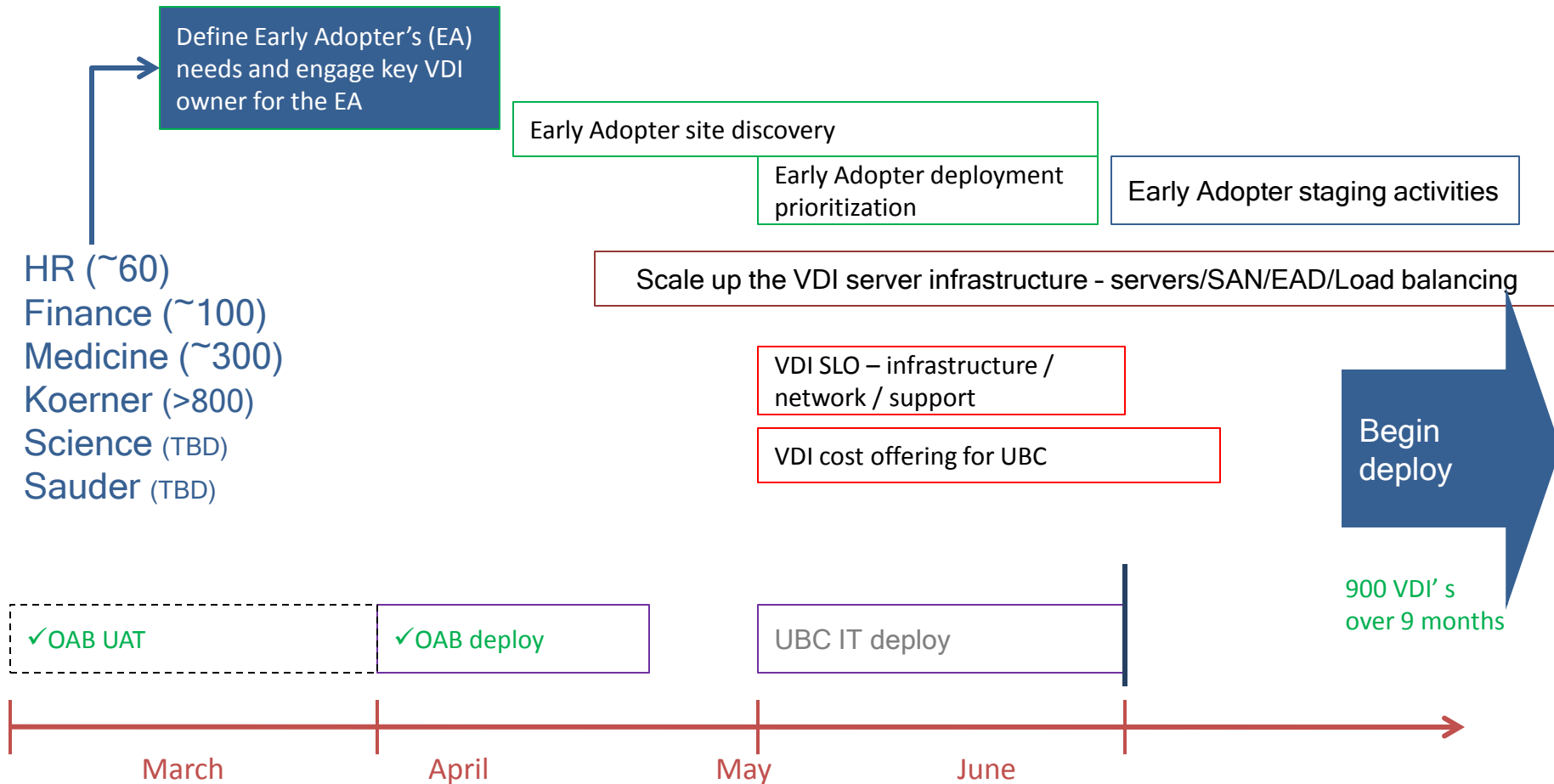


Image Types and Anticipated Adoption Rates

Image Type	Pro	Con	Adoption Rate
Staff	Moderate usage patterns. Core applications. Few exceptions.	Mac Users. Mobile Users.	80%
Research (Faculty and Graduate Students)	Some faculty members like the idea of desktop-as-a-service (small, quiet, robust, accessible via VPN/RDP)	Disincentive: Mostly obligated (by NSERC and CFI grant requirements) to procure and maintain unique equipment	10%-20%
Lab and Kiosk	Standard images. Regular rebuilds.	Peakish usage patterns. Not always MS Windows. Specialized Equipment	30%-80%



Virtual Desktop 2011 Implementation Planning - UBC



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QUESTIONS?

More info on VDI:

contact the PM: johnsmah@exchange.ubc.ca

Online updates: <http://www.it.ubc.ca/projects/virtualdesktop.html>

